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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,509	08/10/2001	Murat Belge	081513-71	7429

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EXAMINER	
ODOM, CURTIS B	
ART UNIT	**PAPER NUMBER**
2634	

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/925,509	BELGE ET AL.	
	Examiner	Art Unit	
	Curtis B. Odom	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,29-32 and 57-73* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,29-32 and 57-73* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 2, 4, 29-32, and 57 are objected to because of the following informalities:

a. In claim 2, "SNR" is suggested to be changed to "signal-to-noise ratio (SNR)".

b. In claims 4, 29-32, and 57 "CO" and "CPE" are suggested to be changed to "central office (CO)" and "customer premises (CPE)".

Appropriate correction is required.

c. In claim 57 "information" is suggested to be changed to "logic" or "computer readable medium".

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 29-32, 57-73 are rejected under 35 U.S.C. 102(e) as being anticipated by Tzannes (US 2002/0009155).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Tzannes discloses a multicarrier communication line characterization system comprising:

a data postprocessing module (sections 0035-0041, Fig. 1, block 60); and

a data interpretation module(Fig. 1, block 40, section 0038), wherein raw data received from one or more modems via a data collection module (Fig. 1, block 50) is used to determine the characteristics of a communications link.

Regarding claim 2, which inherits the limitations of claim 1, Tzannes discloses the data processing module performs at least one of a calibration, a filter compensation, a determination of the SNR Medley from a bits and gains table and a data rate conversion (Fig. 1, block 60, section 0041, updating data rates).

Regarding claim 3, which inherits the limitations of claim 1, Tzannes discloses the data interpretation module performs at least one a loop characterization, an interferer detection, a data reduction estimation and a data rate estimation (Fig. 1, block 40, section 0048).

Regarding claim 4, which inherits the limitations of claim 1, Tzannes discloses the communications link is a portion of at least one of a digital subscriber line communications system, a discrete multi-tone communications system or discrete wavelet multi-tone communications system (section 0011), and the multicarrier

communications line characterization system outputs visually displayable data (Fig. 1, block 80, section 0034) about the communications link based on data obtained from one or more of a CO or CPE modem, wherein personal computers display communication link information.

Regarding claim 29, Tzannes discloses a method of characterizing a multicarrier communications link comprising:

postprocessing (section 0041, updating data rate) data received from one or more of a CO and a CPE modem, wherein since the components of the modem (measurement, device, postprocessor, interpretation module can be located in either the CO or CPE modem (section 0033), then the data could be measured at one modem and transmitted to the other modem for postprocessing and interpretation; and

interpreting (sections 0036-0038) the data to determine the characteristics of the communications link.

Regarding claim 30, which inherits the limitations of claim 29, Tzannes discloses the postprocessing comprises at least one of a calibration, a filter compensation, a determination of the SNR Medley from a bits and gains table and a data rate conversion (section 0041, updating data rate (data rate conversion)).

Regaarding claim 31, which inherits the limitations of claim 29, Tzannes discloses the data interpretation comprises at least one of a loop characterization, a interferer detection, a data reduction estimation and a data rate estimation (sections 0036-0038).

Regarding claim 32, which inherits the limitations of claim 29, Tzannes discloses the communications link is a portion of at least one of a digital subscriber

line communications system, a discrete multi-tone communications system or discrete wavelet multi-tone communications system (section 0011), and wherein visually displayable data about the communications link based on data obtained from one or more of the CO or the CPE modem is output (Fig. 1, block 80, section 0034), wherein personal computers display communication link information.

Regarding claim 57, Tzannes discloses an information storage media (sections 0049-0051) comprising information for characterizing a multicarrier communications link comprising:

logic (section 0041, updating data rate) that postprocesses data received from one or more of a CO and a CPE modem; and

logic (sections 0036-0038) that interprets the data to determine the characteristics of the communications link.

Regarding claim 58 Tzannes discloses a communication line characterization system (Fig. 1) comprising:

a data interpretation module (sections 0036-0038) designed to receive raw measurement (SNR, channel noise) data from a remotely located multicarrier modem having an embedded data collection module, the data interpretation module designed to interpret the raw measurement data received from the data collection module to determine characteristics (data rate) of a communication line, wherein since the components of the modem (measurement, device, postprocessor, interpretation module can be located in either the CO or CPE modem (section 0033), then the data could be measured at one modem and transmitted to the other modem for postprocessing and interpretation

Regarding claim 59, which inherits the limitations of claim 58, Tzannes discloses the data interpretation module performs at least one of a loop characterization, an interferer detection, a data reduction estimation and a data rate estimation (section 0038).

Regarding claim 60, which inherits the limitations of claim 58, Tzannes discloses the raw measurement data comprises at least a measurement of idle channel noise (ICN) (sections 0035-0036).

Regarding claim 61, which inherits the limitations of claim 60, Tzannes discloses the interpretations module determines the estimated data rate of the telephone line based on the idle channel noise (ICN) (section 0038).

Regarding claim 62 Tzannes discloses a communication line characterization system (Fig. 1) comprising:

a modem (Fig. 1, section 0036-0038) having a data collection module designed to collect raw measurement data (SNR, channel noise);

a remotely located data interpretation module (sections 0036-0038) designed to receive raw measurement (SNR, channel noise) data from the data collection module, the data interpretation module designed to interpret the raw measurement data received from the data collection module to determine characteristics (data rate) of a communication line, wherein since the components of the modem (measurement, device, postprocessor, interpretation module can be located in either the CO or CPE modem (section 0033), then the data could be measured at one modem and transmitted to the other modem for postprocessing and interpretation

Regarding claim 63, which inherits the limitations of claim 62, Tzannes discloses

the data interpretation module performs at least one of a loop characterization, an interferer detection, a data reduction estimation and a data rate estimation (section 0038).

Regarding claim 64, which inherits the limitations of claim 62, Tzannes discloses the raw measurement data comprises at least a measurement of idle channel noise (ICN) (sections 0035-0036).

Regarding claim 65, which inherits the limitations of claim 64, Tzannes discloses the interpretations module determines the estimated data rate of the telephone line based on the idle channel noise (ICN) (section 0038).

Regarding claims 66-73, the claimed method includes features corresponding to the above rejection of claims 58-65 which is applicable hereto.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bengtsson et al. (U. S. Patent No. 6, 347, 217) discloses reporting link quality data and displaying the link quality data on a computer.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom
October 9, 2005

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